

RE Responsibilities Before Construction

➡ Course Highlights

- ⇒ Introduction
- ⇒ Recent Fines
- ⇒ Role of the Players
- ⇒ Management Tools
- ⇒ **RE Responsibilities Before Construction**
- ⇒ RE Responsibilities During Construction
- ⇒ Project Closeout Responsibilities

- ➡ Review the RE Pending File
- ➡ Appoint your SWPPP Inspector
- ➡ Conduct Pre-Construction Meetings
- ➡ **WPC Strategies**
- ➡ Review the SWPPP/WPCP

Water Pollution Control Strategies

- ➡ Prevent storm water contact with the construction site
- ➡ Protect disturbed soil areas (DSAs) from erosion
- ➡ Minimize sediment in storm water before discharge
- ➡ Prevent storm water contact with other pollutants
- ➡ Prevent non-storm water discharges



Prevent Storm Water Contact With The Construction Site

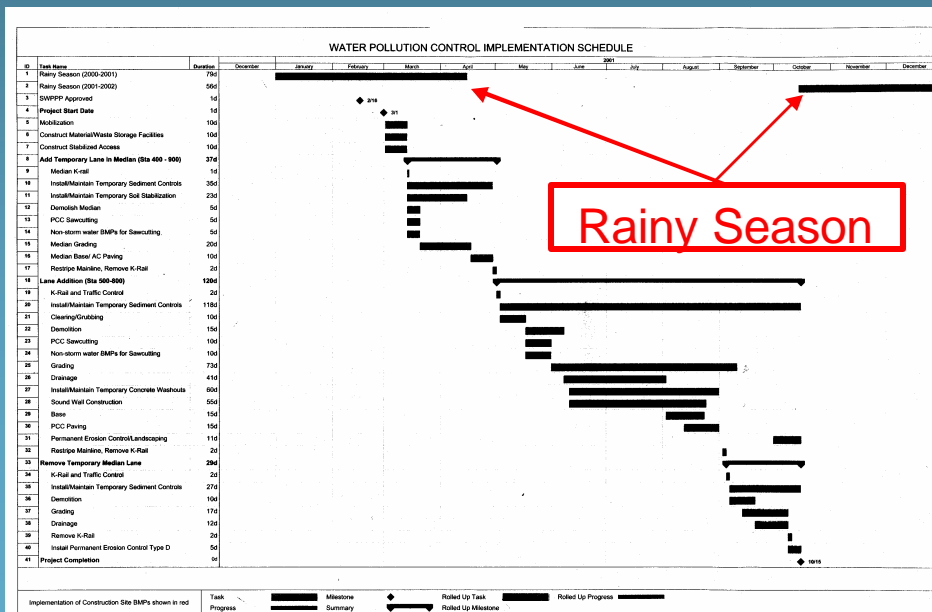
- ➔ Storm water from the sky - Rainfall
- ➔ Storm Water from adjacent areas - Run-on



Prevent Storm Water Contact With The Construction Site

➔ A BMP that is practicable to protect DSAs from rainfall is:

➔ **Scheduling**



Prevent Storm Water Contact With The Construction Site

➡ BMPs practicable to protect DSAs from run-on are:

⇒ Earth dikes/drainage swales and lined ditches

⇒ Sandbag Barriers



Protect Disturbed Soil Areas From Erosion

➔ **BMPs to protect DSAs from erosion are:**

- ➔ Temporary soil stabilization
- ➔ Top of slope dikes
- ➔ Slope drains
- ➔ Gravel bag berms or fiber rolls



Minimize Sediment In Storm Water Before Discharge

➡ Sediment Barriers

- ➡ Silt Fence
- ➡ Sandbag barrier
- ➡ Straw bale barrier
- ➡ Fiber Rolls
- ➡ Gravel Bag Berm

➡ Sediment/Desilting Basins and Sediment Traps



Prevent Storm Water Contact With Other Pollutants

- ➔ Minimize storage and non-essential activities
- ➔ Store materials/wastes in watertight containers
- ➔ Cover stored materials and wastes
- ➔ Prevent run-on
- ➔ Clean up spills of materials and wastes



Prevent Non-Storm Water Discharges

- ➔ Paving and concrete waste
- ➔ Dewatering operations
- ➔ Vehicle and Equipment Cleaning, Fueling, maintenance
- ➔ Sanitary/septic waste
- ➔ Runoff from dust control
- ➔ Materials or chemicals leaks and spills
- ➔ Pile Driving
- ➔ Material and Equipment over water
- ➔ Structures demo over water



Contract Documents

- ➔ Standard Specifications
- ➔ Contract Special Provisions
- ➔ Project Plans



Standard Specifications

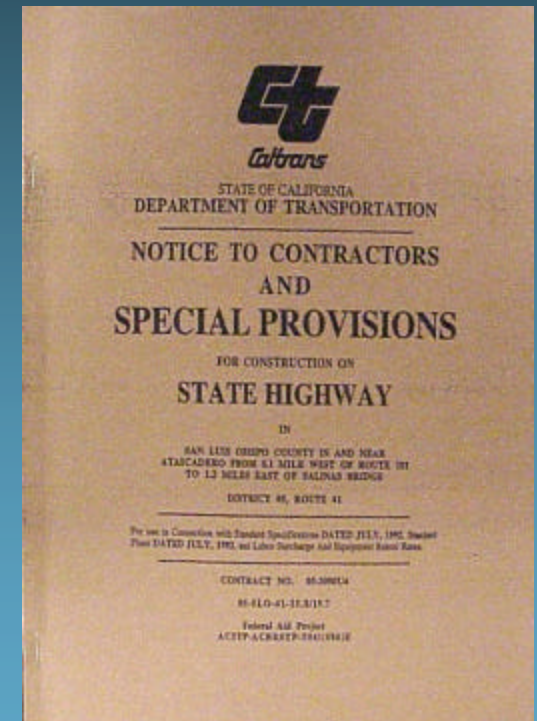
- ➔ Section 7-1.01G, Water Pollution
- ➔ Section 10, Dust Control
- ➔ Section 16, Clearing and Grubbing
- ➔ Section 18, Dust Palliative
- ➔ Section 20, Erosion Control and Highway Planting



Contract Special Provisions

➡ Section 10-1. Water Pollution Control

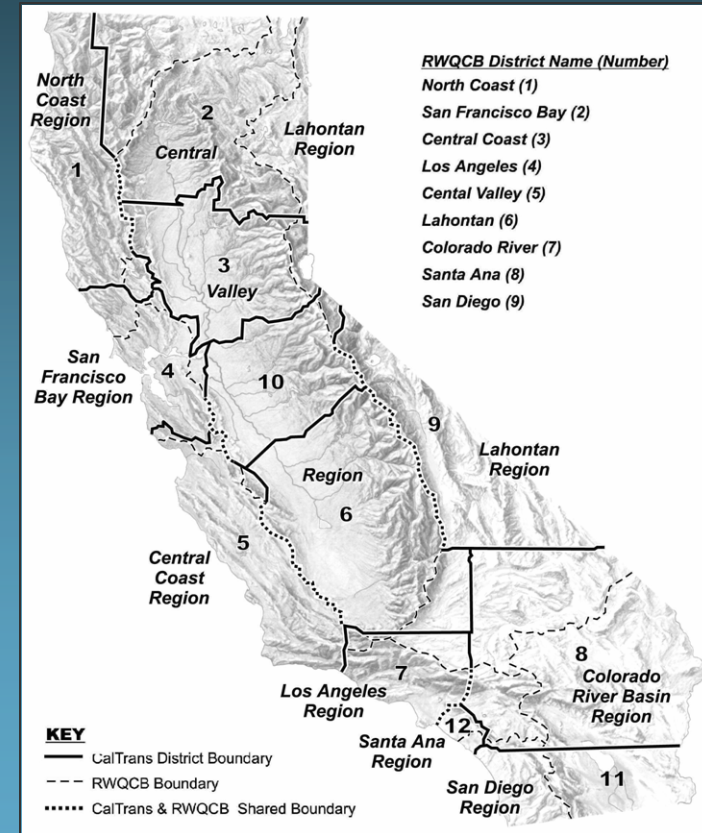
- ➡ Issued to satisfy the NPDES Permit requirements
- ➡ Requires use of the Storm Water Quality Handbooks
- ➡ Details water pollution control requirements



Contract Special Provisions

➔ Contents of Water Pollution Control Specifications

- ➔ Identifies plan required (SWPPP or WPCP)
- ➔ Identifies appropriate RWQCB
- ➔ The SWPPP/WPCP contents and approval process
- ➔ Additional required BMPs
- ➔ Identifies cost breakdown requirements
- ➔ Year round requirements



Contract Special Provisions

➔ Contents of Water Pollution Control Specifications (Cont.)

- ➔ Defines active and non-active Disturbed Soil Areas (DSAs)
- ➔ Defines the rainy and non-rainy seasons
- ➔ Defines maximum active DSAs during the rainy season
- ➔ Inspection and maintenance requirements

Contract Special Provisions

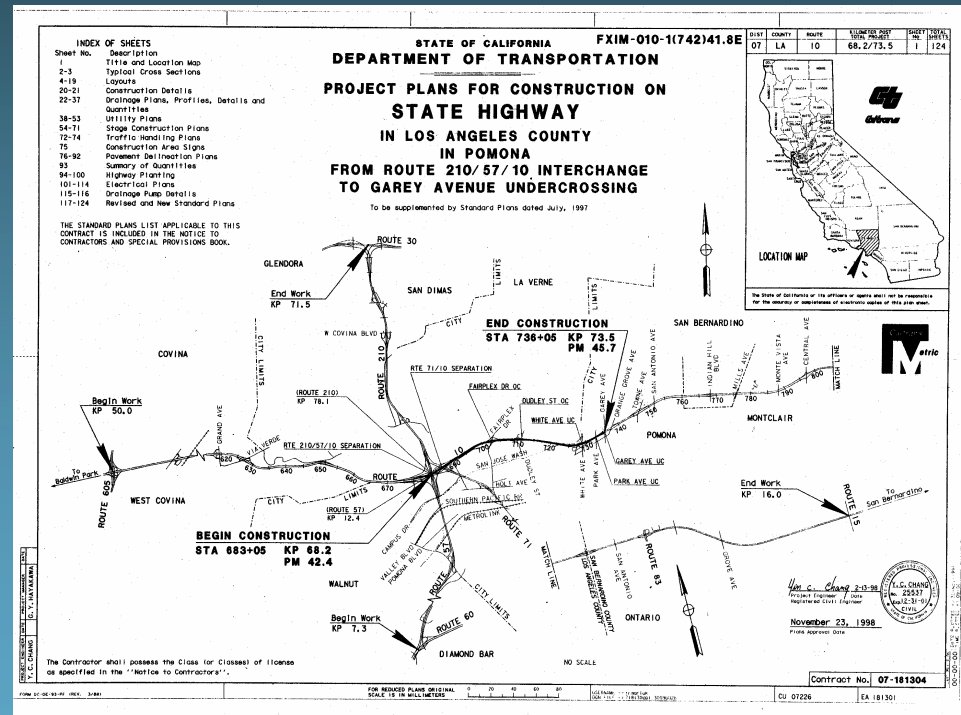
➡ Contents of Water Pollution Control Specifications (Cont.)

- ⇒ Winter Shutdown (if applicable)
- ⇒ Sampling and Analytical Requirements
- ⇒ Analytical Results and Evaluation
- ⇒ Move-In/Out for Permanent Erosion Control
- ⇒ 50/50 BMP Maintenance Sharing
- ⇒ Progress Payments/Detention/Retention

Project Plans

➔ Conduct review of plans in context of water pollution control Specifications

- ➔ General layout
- ➔ Existing drainage courses
- ➔ Facility being constructed or modified
- ➔ Staging of project
- ➔ Possible desilting basin locations

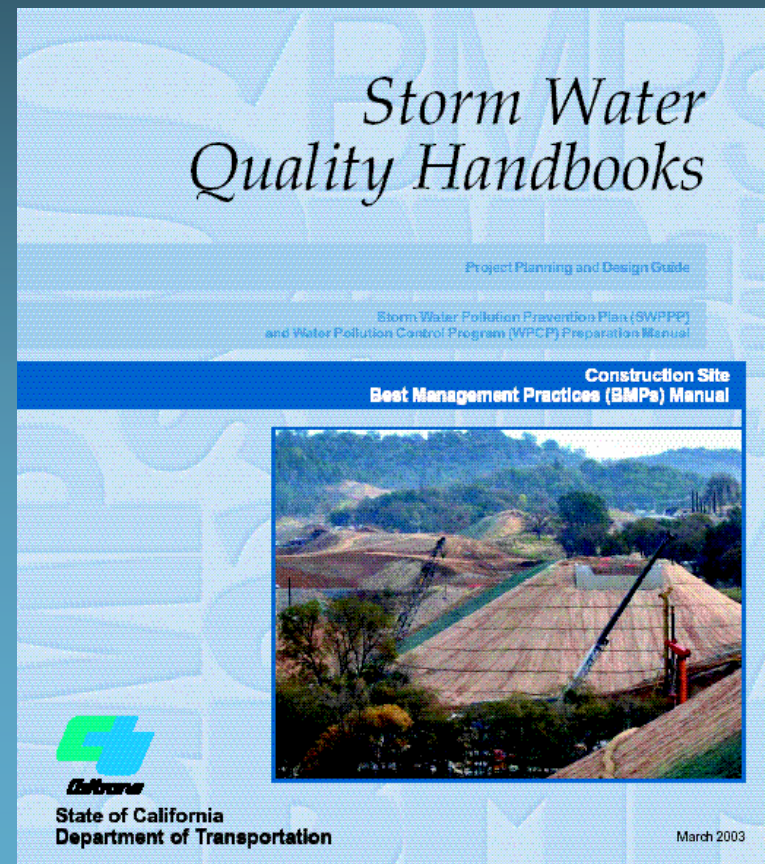


Manuals

➡ Caltrans Storm Water Quality Handbooks

⇒ Construction Site BMPs Manual:

Know and understand this manual



RE Responsibilities Before Construction

➡ Course Highlights

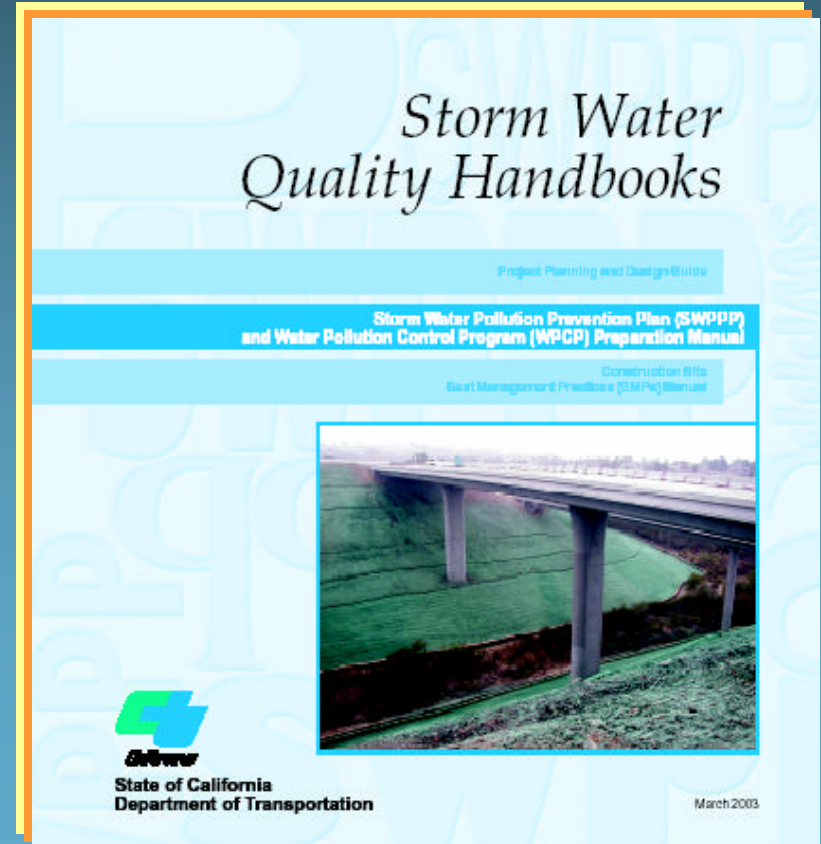
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Use the SWPPP/WPCP Preparation Manual

➡ Caltrans Storm Water Quality Handbooks

➡ Storm Water Pollution Prevention Plan (SWPPP)
and Water Pollution Control Program
Preparation (WPCP) Manual



How is the Manual set up?

Each Section has:

INSTRUCTIONS

....Telling you what is
necessary in that section

REQUIRED TEXT

....Telling the contractor exactly
what verbiage to use in the document

Some sections have:

EXAMPLES

..... Showing you what the
section might include

Title Page

➡ Section 2, page 9 of 97 of Prep Manual

➡ Required Information

- ➡ Storm Water Pollution Prevention Plan
- ➡ Construction Project Name
- ➡ Caltrans Contract Number
- ➡ Identification of Lead Agency (Caltrans or Local Agency)
- ➡ Resident Engineer name and Phone #
- ➡ Contractors Name, Address, Telephone Number, and Contact Person

Title page (continued)

➡ Required Information (continued)

- ➡ Job Site Address and Telephone Number (if any)
- ➡ Name of Contractors Water Pollution Control Manager (WPCM)
- ➡ Name of Company that Prepared the SWPPP
- ➡ SWPPP Preparation Date



Table of Contents

- ➔ Preparation Manual page 11 of 97
- ➔ Include the Number and Names for each section
- ➔ List page number for each subsection
- ➔ Include a Tab for each Major Section and each Attachment

Section 100

- ➔ **Preparation Manual page 14 of 97**
- ➔ **SWPPP Certification and Approval**
 - ⇒ 100.1 Initial SWPPP Certification
 - ⇒ 100.2 SWPPP Approval
 - ⇒ 100.3 Annual Compliance Certification

SWPPP Certification

➡ 100.1 Initial SWPPP Certification

- ⇒ Required Text
- ⇒ Project Name
- ⇒ Caltrans Contract Number
- ⇒ Contractors signature, Name, Title, Date, and telephone number
- ⇒ Submit to the RE for review and approval
- ⇒ Complete SWPPP Checklist (Attachment L)
- ⇒ Attach NOC (Attachment F)

SWPPP Attachments

➡ Attachment F, Notification of Construction

- ⇒ Provided by Caltrans
- ⇒ Project identification
- ⇒ Regional boards RWQCB
- ⇒ Caltrans District
- ⇒ Field office location
- ⇒ Construction site information

State of California - Department of Transportation (Caltrans)

CP-CEM-2002

4/10/20

NOTIFICATION OF CONSTRUCTION

IN COMPLIANCE WITH CALTRANS STATEWIDE NPDES STORM WATER PERMIT Order No. 99-06 DWQ, NPDES No. CAS000003

I. IDENTIFICATION-Attach Vicinity Map, 1/2 size copy of Title Sheet

Project ROUTE 02		Check One: <input checked="" type="checkbox"/> First Submittal or <input type="checkbox"/> Amendment No. EA 08-405804	Contract Number EA 08-405804	Date MM/DD/YY 1-15-01
City (if applicable)	County SAN BERNARDINO	Tentative Start Date 3-1-01	Tentative End Date 5-01-02	
Route 02	Post Mile	Kilometer Dist 6.8/8.1	Tentative Date SWPPP Available 2-01-01	

II. CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

<input type="checkbox"/> Region 1, North Coast	<input type="checkbox"/> Region 5, Central Valley	<input type="checkbox"/> Region 6, Lahontan	<input type="checkbox"/> Region 7, Colorado River
<input type="checkbox"/> Region 2, San Francisco Bay	<input type="checkbox"/> Sacramento	<input type="checkbox"/> South Lake Tahoe	<input type="checkbox"/> Region 8, Santa Ana
<input type="checkbox"/> Region 3, Central Coast	<input type="checkbox"/> Fresno	<input checked="" type="checkbox"/> Victorville	<input type="checkbox"/> Region 9, San Diego
<input type="checkbox"/> Region 4, Los Angeles	<input type="checkbox"/> Redding		

III. CALTRANS DISTRICT

Name/Number CALTRANS DISTRICT 08	Project Contact WALT GRIFFITH
Address 464 West 4th Street	Position Title Construction SW Coordinator
City San Bernardino	Phone (909) 383-4561
Zip 92401	

IV. CONSTRUCTION FIELD OFFICE- Attach Location Map

Street Address 13911 Park Ave #105B	Construction Contact Mohsen Parvianah
Physical Location (if Different than address above)	Position Title Resident Engineer
City Victorville	Phone (760) 245-8825
State CA	
Zip 92392	

V. CONSTRUCTION SITE INFORMATION

Description and Type of Work Typical roadway section widening, drainage facilities, and tree transplanting.	
Additional related required approvals: <input type="checkbox"/> DTSC Variance <input type="checkbox"/> CWA 404/401 <input type="checkbox"/> DFG 1601 <input type="checkbox"/> NPDES/WRDs <input type="checkbox"/> Other	
Describe:	
Total Construction Area: 10 Acres	Total Disturbed Area: 8 Acres
Receiving Water Name:	Project In Or Adjacent to Receiving Water?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Project Discharges to?: <input type="checkbox"/> Groundwater Infiltration	Municipal/Other System Name: San Bern Co

VI. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

Signature: Walt Griffith
Print/Type Name: **Walt Griffith**

Date: **1-15-01**
Title: **Construction SW Coord.**

SWPPP Attachments

➡ Attachment L, SWPPP and Monitoring Program Checklist

- ⇒ Provides a checklist for all item that shall be identified in the SWPPP
- ⇒ Insures that all required elements are addressed

SWPPP Approval

⇒ 100.2 SWPPP Approval

- ⇒ Required Text
- ⇒ Local Agency Administration (Yes/No)
- ⇒ RE name, signature, telephone number and date
- ⇒ Local Agency Administration
 - Name
 - Local Agency RE name, signature, and telephone number, and date

SWPPP Certification and Approval

➡ 100.3 Annual Compliance Certification

- ⇒ Preparation Manual page 17 of 97
- ⇒ Required text for this section
- ⇒ Prepared by qualified person
 - List person's name and contact number in the SWPPP
- ⇒ Completed by June 15th
 - Job starting on or after June 15th requires certification on the following June 15th
- ⇒ Keep completed and signed copies of the annual compliance certification in this section
- ⇒ Include blank copies of forms in Attachment M

June 2001						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17 Father's Day	18	19	20	21	22	23
24	25	26	27	28	29	30

Section 200

⇒ **SWPPP Preparation Manual page 18 of 97**

⇒ **SWPPP Amendments**

⇒ 200.1 SWPPP Amendment Certification and Approval

⇒ 200.2 Amendment Log

200.1 SWPPP Amendment Certification and Approval

➔ Required Text

➔ SWPPP shall be Amended when:

- ➔ Changes in construction or operations which may affect the discharge of pollutants to surface waters, ground water, or municipal separate storm sewer system
- ➔ If any conditions of the Permit are violated
- ➔ General objective of reducing or eliminating pollutants in storm water discharges has not been achieved
- ➔ If the RWQCB determines that a Permit violation has occurred, changes must be implemented in 14 days
- ➔ When required by the Special Provisions
- ➔ When deemed necessary by the RE

200.1 SWPPP Amendment Certification and Approval

➡ Required Text

➡ The following items will be included in each amendment:

- ⇒ Who requested the amendment;
- ⇒ The location of proposed change;
- ⇒ The reason for change;
- ⇒ The original BMP proposed, if any; and
- ⇒ The new BMP(s) proposed

200.2 Amendment Log

➡ Required text for the Amendment Log:

- ⇒ Project Name
- ⇒ Caltrans Contract Number
- ⇒ Amendment Number
- ⇒ Date
- ⇒ Brief description of Amendment
- ⇒ Prepared By

Section 300

➔ Introduction and Project Description

- ➔ 300.1 Introduction and Project Description
- ➔ 300.2 Unique Site Features
- ➔ 300.3 Project Schedule/Water Pollution Control Schedule
- ➔ 300.4 Construction Site Estimates
- ➔ 300.5 Contact Information/List of Responsible Parties

300.1 and 300.2

➔ 300.1 Introduction and Project Description

- ⇒ Provide legal description of the project
- ⇒ Proximity to receiving waters
- ⇒ Identify who owns the drainage system

➔ 300.2 Unique Site Features

- ⇒ Provide a brief description of unique features
 - Significant or high-risk construction activities
 - Any features or activities within or adjacent to water bodies



300.3

➡ Construction Site Estimates

- ⇒ Required text
- ⇒ Construction site area
- ⇒ Runoff coefficient before and after construction
 - Include calculations in Attachment D
- ⇒ Percentage impervious area before and after construction
- ⇒ Anticipated storm water flow on to site
 - Include run-on calculations in Attachment E

SWPPP Attachments

➔ Attachment D

- ➔ Computation Sheet for determining Runoff Coefficients
 - Determines the amount off runoff before and after construction



SWPPP Attachments

➡ Attachment E

⇒ Calculation for Storm Water Run-on

- Determines the amount of anticipate storm water run-on
- Helps in designing temporary BMPs to control erosion



➡ Project Schedule / Water Pollution Control Schedule

⇒ Written and graphical schedule

- Show how the rainy season relates to soil disturbing and re-stabilization activities

⇒ Adequate details for major activities sequenced with implementation of BMPs

- Project start and finish dates
- Rainy seasons dates
- Annual certification
- Mobilization dates
- Mass clearing and grubbing/road side clearing dates
- Major grading/excavation dates
- Special dates in other permits (Army Corp, Fish and Game)

300.4

➡ Project Schedule (continued)

⇒ Adequate details for major activities sequenced with implementation of BMPs (continued)

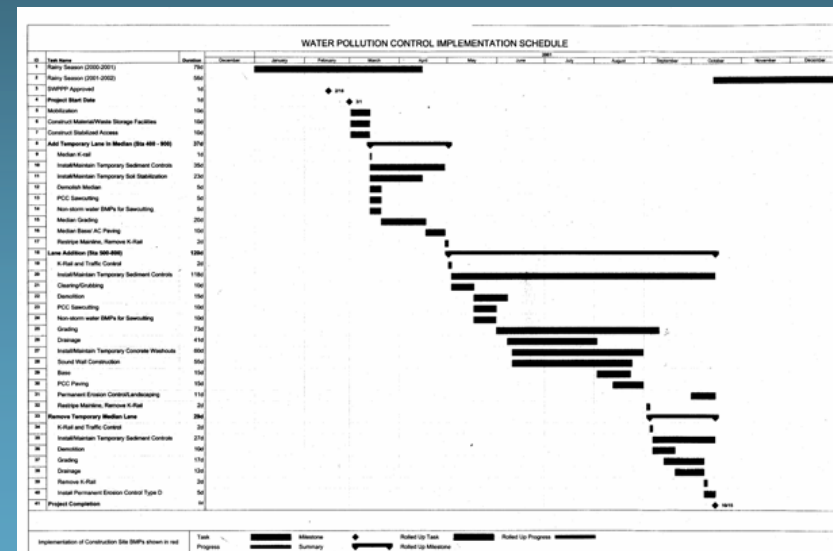
- Annual submittal of rainy season implementation - if required
- Pre-rainy season temporary soil stabilization or Sediment control BMPs (if required by the Special Provisions)
- Rainy season implementation schedule for soil stabilization, sediment controls, wind erosion controls, tracking controls, non-storm water, waste management and materials BMPs
- Non-rainy season implementation schedule of same
- Pavement operations

300.4

➔ Project Schedule (continued)

⇒ Adequate details for major activities sequenced with implementation of BMPs (continued)

- Major planned stockpiling operations
- Non-storm water discharges, dewatering or grinding operations
- Final stabilization activities (staged)
- See page 25 and 26 of SWPPP Preparation Manual (11x17 foldout)
- Lahontan RWQCB prohibits removal of vegetation or ground disturbance in specific areas (October 15 through May 1)



300.5

- ⇒ **Page 30 of 97 of the Manual**
- ⇒ **Required text**
- ⇒ **Contact Information/List of Responsible Parties**
 - ⇒ List contractors person(s) responsible for water pollution controls during construction including name, company, address, and telephone number

300.5

➡ **Water Pollution Control Manager (WPCM) duties**

- ⇒ Must be available at all times throughout the duration of the project
- ⇒ Ensuring full compliance with the SWPPP and Permit
- ⇒ Implementation of erosion and sediment control measures
- ⇒ Implement all non storm water, materials and waste management activities
- ⇒ Storm event inspections (pre-, post-, and during)
- ⇒ Routine inspections
- ⇒ Preparing annual compliance certification
- ⇒ Ensuring elimination of all unauthorized discharges
- ⇒ Authority to mobilize crews for immediate repairs
- ⇒ Coordinate with the RE
- ⇒ Submit Notice of Discharge and report IC/ID

Section 400

➔ References

- ➔ Page 32 of 97 of the SWPPP Preparation Manual
- ➔ Required text
- ➔ Identify all Documents Referenced in the SWPPP
 - Project Plans and Specifications
 - NPDES permits
 - Other permits Army Corp, DF&G, DTSC ADL variance, etc.
 - Handbooks, references, manuals, guidance
 - Project reports: geotechnical, soils, materials, drainage
 - Include complete reference name, number, author, date, and revision dates that apply
- ➔ All referenced materials not attached to SWPPP must be kept on-site and be readily available for review

Section 500 Body of SWPPP

- ➔ 500.1 Objectives
- ➔ 500.2 Vicinity Map
- ➔ 500.3 Pollutant Source Identification and BMP Selection
- ➔ 500.4 Water Pollution Control Drawings
- ➔ 500.5 Construction BMP Maintenance, Inspection and Repair
- ➔ 500.6 Post-Construction Storm Water Management
- ➔ 500.7 Training
- ➔ 500.8 List of Subcontractors
- ➔ 500.9 Other Plans or Permits

500.1

⇒ Objectives

⇒ Required text

- ⇒ Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activities from the construction site
- ⇒ Identify non-storm water discharges
- ⇒ Identify, construct, implement in accordance with a time schedule, and maintain BMPs to reduce or eliminate pollutants in storm water and non storm water discharges during construction
- ⇒ Develop a maintenance schedule for BMP installed during construction to reduce or eliminate pollutants after construction

500.1

⇒ Objectives

⇒ Required text

- ⇒ Conforms with Caltrans and General Permits
- ⇒ Amendment requirements
- ⇒ SWPPP will be readily-available on-site for duration of the project

500.2

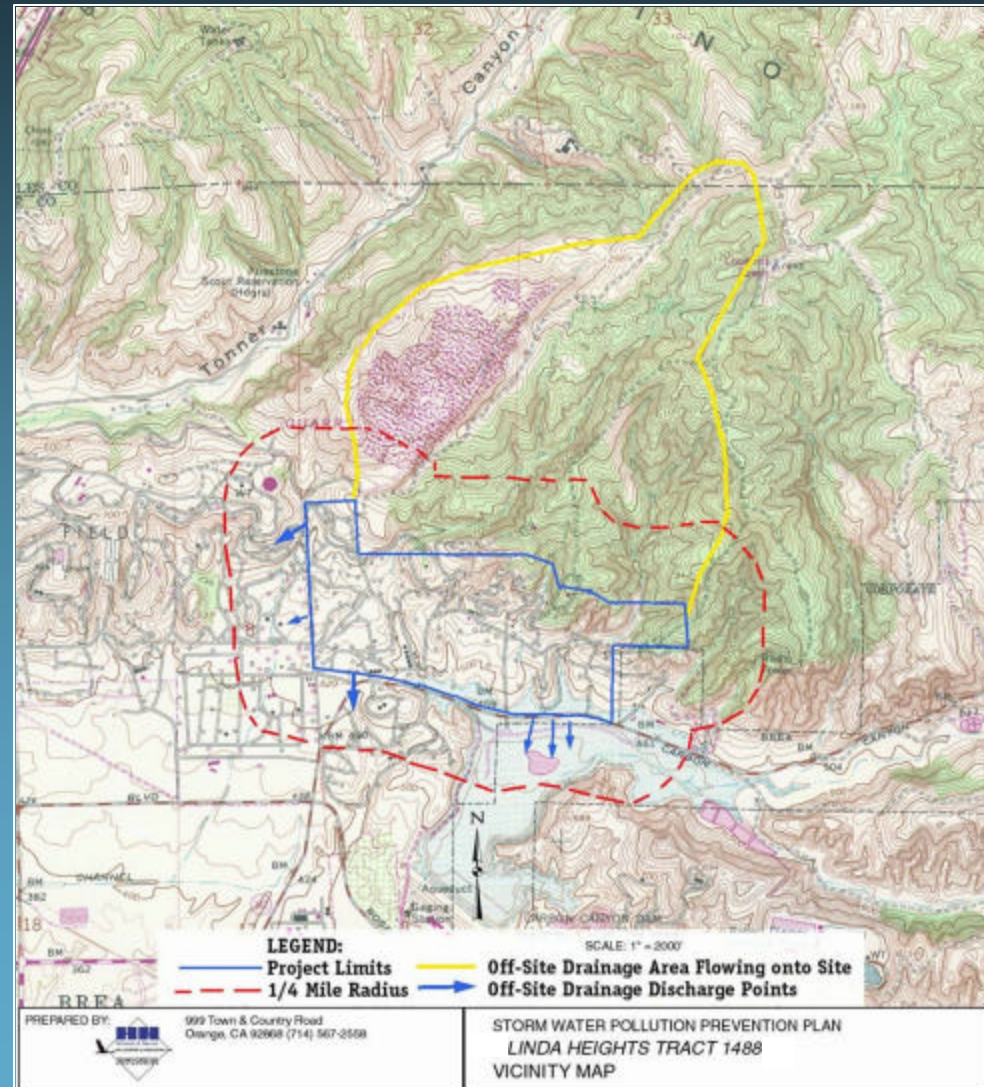
➔ Vicinity Map

- ⇒ Required text, map size
- ⇒ A vicinity map and site map are required.
- ⇒ Included as Attachment A to SWPPP
 - Vicinity Map
 - Use a USGS map or equivalent
 - Extend approximately 400 M or one-quarter mile of project boundary
 - Shows all necessary information
 - Site Map
 - Include title sheet from project plans

Vicinity Map

Vicinity Map shows:

- ➔ Outline of site perimeter
- ➔ Easily identifiable major roadways
- ➔ Geographic features or landmarks
- ➔ Water bodies within or adjacent to the project site
- ➔ Construction site perimeter
- ➔ Known wells
- ➔ Outline of offsite drainage areas discharging to the construction site
- ➔ Discharge locations
- ➔ General topography and geographical features surrounding the site





500.3

- ➡ **Page 37 of 97 of the SWPPP Preparation Manual**
- ➡ **500.3 Pollutant Source Identification and BMP Selection**
 - ⇒ 500.3.1 Inventory of materials and activities that may Pollute Storm Water
 - ⇒ 500.3.2 Existing (Pre-construction) Control Measures
 - ⇒ 500.3.3 Nature of Fill Material and Existing Data Describing Soil
 - ⇒ 500.3.4 Soil Stabilization
 - ⇒ 500.3.5 Sediment Controls
 - ⇒ 500.3.6 Tracking Controls
 - ⇒ 500.3.7 Wind Erosion Controls
 - ⇒ 500.3.8 Non-Storm Water Controls
 - ⇒ 500.3.9 Waste Management and Materials Pollution Controls

500.3.1

➔ Inventory of Materials and Activities that may Pollute Storm Water

- ⇒ Required text
- ⇒ List all construction materials that have the potential to contribute to the discharge of pollutants to storm water
 - Vehicle fluids, including oil, grease, petroleum, and coolants
 - Asphaltic emulsions associated with paving operations
 - Cement materials associated with PCC operations
 - Joint and curing compounds
 - Paints, solvents, thinners, acids
 - Treated lumber, mortar mix
 - Landscape materials
 - Masonry block
 - General litter



500.3.1

➔ **List all construction activities that may have the potential to contribute sediment to storm water discharges**

- Clear and grub operations
- Grading operations
- Soil import operations
- Utility excavation operations
- Landscaping operations
- Sandblasting operations

➔ **Insert additional bullets as necessary to complete the inventory**



500.3.2

➔ Existing (pre-construction) Control Measures

⇒ Required text

⇒ Identify any existing control measures in place prior to construction including but not limited to:

- Detention basins
- Infiltration basins
- Sediment basins
- Oil water separators
- Bridge and Rock slope protection
- Existing erosion control measures
- Existing landscaping
- Energy dissipaters
- Lined ditches



500.3.3

- ➔ **Nature of Fill Material and Existing Data describing Soil**
 - ⇒ **Required text**
 - ⇒ **Describe the conditions of fill material and soil on the construction site**
 - **Type of soil**
 - **Groundwater location**
 - ⇒ **Show and/or describe existing site features that, as a result of past usage may contribute pollutants to storm water**
 - **Toxic materials**
 - **Aerially Deposited Lead (ADL)**